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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,220	12/19/2000	Philip W. Doberenz	5038-39	7641
32231	7590	06/23/2005	EXAMINER	
MARGER, JOHNSON & MCCOLLOM, P.C. - INTEL			BAYARD, EMMANUEL	
1030 SW MORRISON ST.				
PORTLAND, OR 97205			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/741,220

Applicant(s)

DOBERENZ, PHILIP W.

Examiner

Emmanuel Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This is in response to amendment filed on 3/7/05 in which claims 1-15 are pending. The applicant's amendments have been fully considered but they are moot based on the new ground of rejection therefore this case is made final.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Shell U.S. Patent No 4,691,199.

As per claims 1, 8 and 13, Shell discloses a method for decoding a pair of quadrature signals, the method comprising: a) obtaining a first sample of the quadrature signals (see fig.1, element 23 and col.3, lines 26-32) from a detector on a moving object(see fig.1 element 11 and col.1, lines 50-55 and col.3, lines 9-10); b) determining a last direction of the moving object and a last state using the first sample (col.3, lines 56-67 and col.4, lines 20-35); c) obtaining a second sample, wherein a current state is determined using the second sample (see col.3, lines 65-66 and col.4, lines 4, 25); d) generating an output responsive to the last sample, a last direction of the moving object and their current state wherein the output adjust for any skipped states (see abstract and col.4, lines 26-50).

As per claim 2, Shell teaches the method is performed for an X (horizontal) axis pair and a Y (vertical) axis pair of the object movement (see col.1, lines 45-60 and col.4, lines 23-53).

As per claim 3, Shell teaches a memory table is considered as the claimed (looking up) the output in a positive look-up table if the direction is positive; and a memory table is considered as the claimed (looking up) the output in a negative look-up table if the direction is negative (see fig.2 element map memory and abstract.).

As per claim 4, Shell teaches quadrature signals generated by a user input device (see col.1, line 57).

As per claim 5, Shell teaches determining motion and rotation direction from the output to calculate X axis and Y-axis velocity components of relative movement in X axis and Y-axis directions of the sampled objects (see col.4, lines 23-53).

As per claim 6, Shell inherently teaches there are more than one positive look-up tables and more than one negative look-up tables and the selection of a look-up table depends upon a number of states that were skipped.

As per claim 7, Shell inherently teaches, wherein the method further comprises summing outputs generated during a predetermined period, and transmitting a sum for each axis of movement at the end of the period (see col.8, lines 55-67).

As per claim 9, Shell inherently teaches, wherein the method further comprises summing output signals for a predetermined length of time.

As per claim 10, Shell inherently teaches providing an output signal to a host computer comprised of a sum of outputs .

As per claim 11, Shell teaches the last direction is one of either positive or negative direction (see col.4, lines 23-53).

As per claim 12, Shell teaches, wherein different lookup tables are used depending upon the last direction being positive or negative (see abstract and col.4, lines 23-53 and col.5, lines 15-50).

As per claim 14, Shell inherently teaches a computer readable medium (see col.1, lines 18-20) and inherently includes, wherein the software code is contained in a downloadable file.

As per claim 15, Shell inherently teaches, wherein the software code, when executed further results in: a) summation of outputs for a predetermined period of time, thereby creating a net change sum; and b) transmitting the net change sum to a host computer.

### ***Conclusion***

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Buehring U.S. Patent No 5,063,291 teaches an optical grating.

Ward U.S. patent No 4,931,800 teaches a stagger compensated moving target.

Titus et al U.S. patent No 5,825,307 teaches an absolute linear encoder.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vanderpuye Kenneth can be reached on 571 272 3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Bayard  
Primary Examiner  
Art Unit 2638

6/17/05

  
EMMANUEL BAYARD  
PRIMARY EXAMINER